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ABSTRACT

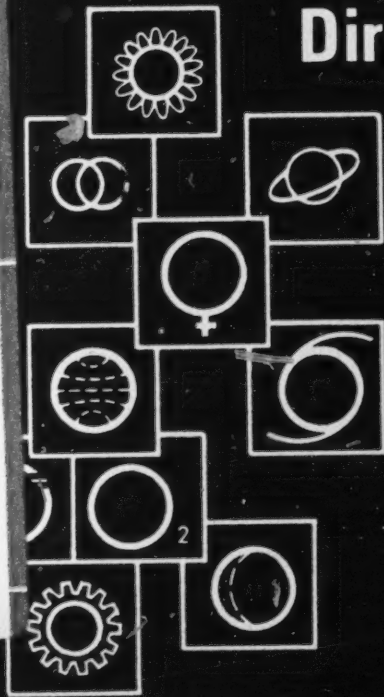
The 32 academic year study programs for 1972-73 sponsored by the National Science Foundation are described in this directory. Institutes are provided for secondary school teachers and supervisors of science, mathematics, and social science at colleges and universities throughout the United States. Information on eligibility, requirements, stipends and allowances, and applications is included. (PR)

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1972-73 Directory



ACADEMIC YEAR STUDY

for Secondary School Teachers
and Supervisors of Science,
Mathematics and Social Science

ED 061036

SE 013 168

DIRECTORY OF

Academic Year Study Opportunities for Secondary School Teachers and Supervisors of Science and Mathematics, 1972-73

INTRODUCTION

The National Science Foundation supports full-time, academic year study opportunities for secondary school teachers and supervisors of science and mathematics to assist in the attainment of the following goals:

- (1) To help schools, through the education of their instructional, resource and supervisory personnel, in developing their capacity for self-improvement in science and mathematics education, and
- (2) To assist the efforts of colleges and universities in developing as part of their regular activities more effective programs for the pre-service and in-service education of science and mathematics teachers.

To these ends, provision is made for the support of projects intended for: (1) teachers interested in concentrating on the study of a single discipline, such as mathematics, physics, chemistry, or biology; (2) teachers interested in studying several related disciplines, such as the physical or earth sciences; (3) teachers interested in preparing themselves for supervisory or consultant positions in science and mathematics education; and (4) supervisors interested in a multidisciplinary program of study in science. Although the study programs of the various projects differ in particulars, they all are intended to enhance the potential of the participants for leadership in science and mathematics education. This directory lists the institutions that have been awarded support by the Foundation for the conduct of such projects.

Some 340 academic year study opportunities will be available during 1972-73 to teachers, supervisors, and intern-teachers at 25 Academic Year Institutes. Of these, 7 will have a "national orientation," i.e., they will draw their participants from the country at large. The remaining 18 will have a "regional orientation," i.e., they will provide opportunities for the education personnel of schools in a service area selected by the host institution.

Similar opportunities are also available within the context of interrelated sets of teacher education activities at 7 Comprehensive Projects designed to enable teachers to pursue coordinated sequences of work leading to career goals. A listing of these projects follows the list of Academic Year Institutes.

It may be possible for many participants to meet the sponsoring institution's requirements for a master's degree in science or mathematics, or in the teaching of science and mathematics, through study offered in the projects. Participation in the project is not, however, necessarily tantamount to admission to the institution's graduate school or to candidacy for an advanced degree, nor does the Foundation require that participants be working toward an advanced degree.

Many of the projects provide coordinated summer training in addition to the academic year program. In some instances the summer work precedes the year-long program and is intended to orient participants to the year's program. Such "preliminary" programs usually require the attendance of most participants. Many other projects offer an optional "related" program during the following summer to assist selected participants in completing degree programs which were begun during the academic year. Selection of participants for the 1973 related summer programs will not be made until February 1973 and will be based upon academic progress and educational objectives. (Individuals may not receive support for a total of more than 8 weeks in "preliminary" and "related" summer programs.)

Participants will be selected by the institutions conducting the projects and not by the National Science Foundation, from among appli-

cants on the basis of their ability to benefit from the program of the project and the contribution they might be expected to make towards the improvement of science and mathematics education in their home schools. In the operation of the project and in selecting individuals for participation in, and for administration of, the project, the host institution will not discriminate on the ground of the race, creed, color, sex or national origin of any applicant or participant.

ELIGIBILITY

A. General Requirements

Teachers and supervisors of science and/or mathematics in grades 7-12 in public or nonpublic schools are eligible for participation in projects for secondary school teachers and to receive National Science Foundation stipend awards, subject to the following criteria:

1. To be eligible for support, science and mathematics teachers must be presently employed in teaching one or more of these subjects, must have had at least 5 years' teaching experience by June 1972 and should ordinarily have received the bachelor's degree.
2. Teachers must meet the specific academic prerequisites established for admission to individual projects. Details concerning these requirements are outlined in the various local brochures.
3. Teachers who have participated previously in an Academic Year Institute will not be accepted for a 1972-73 institute except in certain specialized advanced-level programs identified by an asterisk in the descriptions of the individual Academic Year Institutes below.
4. Teachers who will have completed by September 1972 a substantial portion (2 or more summers) of a sequential program in Summer Institutes, leading to an advanced degree, will not be eligible to

receive stipends in a 1972-73 Academic Year Institute except in unusual circumstances. If a participant is enrolled in a Summer Institute sequence when he accepts an Academic Year Institute stipend offer, he may not receive further support from the summer sequence.

5. Teachers who by September 1972 will have received stipends to attend any three Summer Institutes (unitary or sequential) during the previous 5 years will not be eligible to receive stipends to attend a 1972-73 Academic Year Institute.
6. A teacher who agrees to accept a stipend to attend a 1972-73 Academic Year Institute may not receive a stipend from a 1972 Summer Institute without the prior knowledge and approval of the director of the Academic Year Institute.

B. Requirements for Special Programs

1. Recent college graduates who will have completed certification requirements to teach secondary school science or mathematics by the opening date of the project but who have had no actual teaching experience are eligible for participation as intern-teachers in those projects identified by the symbol "it" in the list of individual institutes below.
2. Secondary school teachers of science and mathematics who have had extensive teaching experience are eligible to apply for training as intern-supervisors to prepare themselves for supervisory or consultant positions in these fields. Training at intern-supervisor institutes, which are identified in the list of Academic Year Institutes, 1972-73, will be at an advanced level and may require the equivalent of a master's degree with a major in subject matter for admission to the program.
3. Although experienced secondary school science supervisors are eligible for partici-

pation in any of the institutes, a program of special interest to such applicants is available at the University of Maryland.

4. To encourage the use of funds provided by other agencies, such as the applicants' school systems, several institutions will provide a limited number of openings for teachers wishing to attend an Academic Year Institute on a nonstipend, tuition-free basis. Applications for these openings will be considered for award immediately on receipt by the host institution and offers will be extended in turn without regard to the program schedule for the tendering of stipend awards. It should be understood that individuals accepting early nonstipend awards will be removed from consideration as possible stipend awardees at other 1972-73 institutes. The institutions cooperating in this effort, as well as the number of nonstipend openings available in each instance, are indicated in the list of 1973-73 Academic Year Institutes.

STIPENDS AND ALLOWANCES

For experienced teachers, the Foundation grants for academic study projects provide for a maximum stipend of \$4,000 for the academic year. An allowance of not more than \$600 is available for each dependent, up to a maximum of four. Additional stipends and dependency allowances are provided for participation in the summer programs. Information on the disbursement of funds may be obtained from the local brochures describing the individual projects.

For intern-teachers in the program, stipends are provided at a reduced rate.

In addition to stipend and dependency allowances, participants will receive a travel allowance amounting to one round trip from home to the institute at a rate of up to 8 cents per mile with a maximum of \$120 total. Participants do not pay tuition or other academic fees.

In most circumstances institute subventions are excludable in whole or in part from gross income for Federal tax computations. In case of doubt the individual participant should consult his District Director of Internal Revenue.

INQUIRIES AND APPLICATIONS

Requests for brochures and application forms and other inquiries should be made by postal card to the project directors at the addresses listed at the conclusion of this section. All admissions to instructional programs will be administered by the colleges and universities involved according to their various individual procedures. The National Science Foundation is not responsible for admission of individuals to the institutions and does not provide information as to institutional requirements.

To assure consideration for applications for Academic Year Institutes, completed application forms should be mailed directly to the institution at which the applicant wishes to study, postmarked no later than January 20, 1972. Successful applicants will be notified of awards on February 15, 1972; all other applicants will be notified as to the status of their applications by February 25. Those who have been offered awards will be expected to signify by March 1 whether they will be able to accept an award. Subsequent to this date acceptances of both stipend and nonstipend offers will be considered as binding agreements, and appointees will be expected to attend the chosen institute. If circumstances that preclude participation arise later, a request to be released from this agreement should be sent immediately to the institute director. While anyone released from such an agreement may not participate in any other Academic Year Institute in the 1972-73 program, he is eligible to make application for participation in any subsequent programs.

The schedule for the submission and consideration of applications for full-time academic year study awards in Comprehensive Projects is set by the host institution and is outlined in its own brochure.

LIST OF ACADEMIC YEAR INSTITUTES 1972-73

The following brief description of each institute indicates the general nature of the academic offerings and the number and type of personnel eligible for participation. Unless otherwise noted the institutes will operate during the academic year falling within the period September 1972-June 1973. Additional summer training periods, if available, are indicated in each individual listing.

Symbols designating personnel eligible are coded as follows:

- j- Experienced junior high school teachers (grades 7-9), including subject-matter supervisors.
- s- Experienced senior high school teachers (grades 9-12), including subject-matter supervisors.
- su- Special program for subject-matter supervisors.
- isu- Special program for subject-matter intern-supervisors—experienced secondary school science and/or mathematics teachers wishing to prepare for supervisory or consultant positions in the secondary schools.
- it- Special program for intern-teachers—recent college graduates certified to teach secondary school science or mathematics but with no actual teaching experience.
- ns- Additional nonstipend, tuition-free openings available to secondary school teachers and supervisors of science and/or mathematics.
- *- Secondary school teachers and supervisors of science and mathematics with previous Academic Year Institute experience are eligible for participation.

NATIONALLY ORIENTED INSTITUTES

Florida State University, Tallahassee, Florida 32306

Study in *Mathematics* for teachers interested in supervisory or other leadership roles in secondary schools. Program includes consideration of such curricular developments as computer and compensatory instruction at the secondary level. Applicants should have strong undergraduate mathematics major or its equivalent. Preliminary program in summer 1972. Dr. Herbert Wills, Department of Mathematics Education.

(isu:2j;12s)

University of Illinois, Urbana, Illinois 61801

Intensive study in *Mathematics* for teachers with strong academic backgrounds. Related program in summer 1973 includes a critical appraisal of a model secondary school mathematics curriculum and practical experience in the conduct of teacher training workshops. Professor Wilson M. Zaring, Department of Mathematics.

(5j;10s)

University of Iowa, Iowa City, Iowa 52240

Intensive study in *Mathematics* and *Science* (Biology, Chemistry, Earth Science, Physics) for teachers interested in the supervision of secondary science and mathematics education. Program includes a supervisory internship in Iowa public school systems. Applicants should have master's degree in science and mathematics or the equivalent. Preliminary program in summer 1972. Professor Robert E. Yager, General Science Studies.

(isu:10s;2ns)

Louisiana State University, Baton Rouge, Louisiana 70803

Study in *Mathematics* for experienced secondary school teachers and supervisors of mathematics. Program includes consideration of such curricular developments as computer science at the secondary level and social aspects of mathematics, as well as training in the conduct of teacher training workshops. Related program in summer 1973. Dr. Houston T. Karnes, Department of Mathematics.

(5j;10s)

University of Maryland, College Park, Maryland
20742

Individualized study in *Science* for supervisors at the policymaking level in secondary science education. While the program is intended to broaden and deepen the subject-matter backgrounds of participants, it also includes consideration of supervisory skills and science learning research, and provides internship experience with scientific and/or educational organizations and governmental agencies. Dr. J. David Lockard, Department of Botany. (12su)

University of Missouri, Columbia, Missouri 65201

Study in *Economics* for teachers and curriculum directors of social sciences leading to a Master of Science in Teaching degree. Related program in summer 1973. Director: Professor John M. Kuhlman. Write: Professor William C. O'Connor, 340 B&PA Building. (7j;8s;3ns)

University of Wisconsin, Madison, Wisconsin
53706

Study in *Science* and/or *Mathematics* for teachers holding master's degree in science or mathematics, who have strong academic and teaching records, and who are interested in supervision. Program includes a one-semester supervisory internship in a Wisconsin school system. Summer programs in 1972 and 1973. Professor John G. Harvey, Department of Mathematics. *(isu:20s)

REGIONALLY ORIENTED INSTITUTES

Atlanta University, Atlanta, Georgia 30314

Study in *Biology* and *Chemistry* for secondary school science teachers in Alabama, Florida, Georgia and South Carolina. Related program in summer 1973. Dr. Lafayette Frederick, Department of Biology. (15s)

Bowdoin College, Brunswick, Maine 04011

Intensive study in *Mathematics* for secondary teachers of mathematics in the New England States, New Jersey, New York and Pennsylvania. Program includes computer applications to high school curricula. Preliminary program in summer 1972. Professor C. A. Grobe, Jr., Department of Mathematics. (10s)

Brown University, Providence, Rhode Island 02912

Study in the *Physical Sciences* for secondary school teachers of the physical sciences in inner-city schools of New England. Program includes a consideration of methodology relevant to inner-city science instruction and urban studies. Dr. Herman F. Eschenbacher, Education Department. (5s)

California State College at Fullerton, Fullerton, California 92631

Study in *Biology* for secondary school teachers of biology in metropolitan Los Angeles. Program involves attendance on a half-time, commuting basis for 2 years. Participants are replaced in the classroom by intern teachers. Summer programs in 1972 and 1973. Professor George C. Turner, Department of Science and Mathematics Education. (5it)

University of Cincinnati, Cincinnati, Ohio 45221

Study in *Mathematics* for teachers of mathematics in greater Cincinnati and adjoining areas. Related program in summer 1973. Dr. Raymond H. Rolwing, Department of Mathematics. (4j;11s;2it;5ns)

University of Colorado, Boulder, Colorado 80302

Study in *Social Science* for Colorado secondary school social science supervisors and teachers interested in supervisory careers. Program includes consideration of a variety of Boulder-based curriculum projects and newly designed multidiscipline social science courses. Preliminary program in summer 1972. Professor John D. Haas, Center for Education in the Social Sciences. (10s)

Grambling College—Louisiana Technological University, Grambling, Louisiana 71245

Program of study in *Mathematics* designed to improve the subject-matter competence of secondary school teachers of mathematics in Louisiana, Mississippi, and Texas. Preliminary program in summer 1972. Professor Samuel H. Douglas, Department of Mathematics (Grambling). (2j;3s)

Illinois Institute of Technology, Chicago, Illinois 60616

Study in *Computer Science* for secondary mathematics or science teachers in Chicago area schools having computer facilities. Program designed to assist schools in implementing educational uses of computers through the development of resource personnel. Related program in summer 1973. Dr. L. R. Wilcox, Department of Mathematics. (3j;12s)

Morgan State College, Baltimore, Maryland 21212

Study in *Mathematics* for secondary teachers of mathematics in the Greater Baltimore area. Related program in summer 1973. Dr. W. R. Talbot, Department of Mathematics. (12s)

University of Oklahoma, Norman, Oklahoma 73069

Study in *Earth Science*, including teaching strategy and curriculum developments for Oklahoma teachers. Program designed to prepare resource personnel in Earth Science to work with local schools in the implementation of innovations in curriculum and classroom practice. Project activities coordinated with state-wide program of cooperative interaction among all state educational agencies, institutions and organizations. Summer activities in 1972 and 1973, including field study. Dr. Edward C. Stoeber, Jr., School of Geology and Geophysics, 830 Van Vleet Oval, Room 107. (7j;6s;7ns)

Oregon State University, Corvallis, Oregon 97331

Study in *Physical Science* emphasizing an interdisciplinary approach. Participants selected from faculty of 15 high schools in Oregon and Washing-

ton wishing to revise their physical science curricula. Preliminary program in summer 1972. Dr. Stanley E. Williamson, Department of Science Education. (15s)

San Diego State College, San Diego, California
92115

Study in *Mathematics* for teachers of mathematics in San Diego City and County. Program involves attendance on a half-time, commuting basis for 2 years with participants being replaced in the classroom by intern-teachers. Summer programs in 1972 and 1973. Dr. Gerald A. Becker, Department of Mathematics. (6it)

Southern Connecticut State College, New Haven, Connecticut 06515

Study in *Mathematics* for secondary teachers of mathematics in Connecticut involving attendance on a half-time basis for 2 years. Participants are replaced in the classroom by intern-teachers. Related program in summer 1973. Dr. Dorothy V. Schrader, Department of Mathematics. (5s;5it)

Syracuse University, Syracuse, New York 13210

Study in the *Biological, Earth and Physical Sciences*, and in Curriculum and Supervision for science teachers in New Jersey, New York and Pennsylvania interested in supervisory or other leadership roles in the secondary schools. Preference given to applicants from schools within 150 miles of Syracuse. Program emphasizes implementation of curricula in schools. Related program in summer 1973. Professor Alfred T. Collette, Department of Science Teaching. (isu:10s)

University of Texas, Austin, Texas 78712

Study in *Biology, Earth Science and Physical Science* for junior high school science teachers in Texas. Opportunity to serve as science supervisor-intern during following year available to 5 participants. Related program in summer 1973. Dr. Addison E. Lee, Science Education Center. (15j)

**University of Virginia, Charlottesville, Virginia
22903**

Coordinated study in *Biology, Chemistry, Physics* and Science Supervision for secondary teachers of science in Virginia and adjacent states interested in supervisory careers. Preliminary program in summer 1972 includes science curriculum development and supervisory internship. Dr. Ertle Thompson, Department of Science Education, Peabody Hall. (isu:15s)

Wayne State University, Detroit, Michigan 48202

Program designed to provide background in *Chemistry* to biology teachers in Detroit and the surrounding metropolitan area using BSCS approach to the teaching of high school biology. Included is a consideration of computer techniques and applications appropriate for secondary science curricula. Related program in summer 1973. Dr. Calvin L. Stevens, Department of Chemistry. (10s;5ns)

**University of Wisconsin, Superior, Wisconsin
54880**

Study in *Physics* for teachers of physics and/or physical science in Wisconsin and adjacent states. Program also includes related study in chemistry, geology or mathematics, with preliminary program in summer 1972 devoted to calculus review. Dr. Phillip R. Brieske, Center for the Advancement of Science Education. (5s;20ns)

LIST OF COMPREHENSIVE PROJECTS 1972-73

Comprehensive Projects represent integrated approaches to teacher education with both pre-service and in-service components that offer opportunities for full- and part-time study during the academic year and summer. The following brief description of each project indicates the general nature of the academic offerings. Each project gives priority to applicants from the particular geographic area indicated in the project description. Teachers interested in pursuing a coordinated sequence of work, which might involve various

combinations of full-time and part-time academic year and summer study, leading to a specific goal should contact individual project directors at the indicated addresses for details.

**University of Arkansas, Fayetteville, Arkansas
72701**

Study in *Mathematics* for junior and senior high school teachers of mathematics in Arkansas. Opportunities available to teachers at all levels of preparation. Program includes consideration of curriculum development, conduct of in-service projects, supervision of mathematics instruction, and teaching strategies, as well as subject matter. Provision is made for the state-wide coordination of the pre-service education of secondary mathematics teachers and the availability of consultative services to teachers and administrators in Arkansas. Dr. William R. Orton, Department of Mathematics.

**University of Mississippi, University, Mississippi
38677**

Study in *Biology, Chemistry* and related *Physics* for junior and senior high school teachers of science, primarily in Mississippi. Opportunities available to secondary teachers at all levels of preparation, with special programs for key teachers, supervisors, supervisor-trainees and teacher-interns. Consultation and resources available to teachers and administrators in Mississippi. Dr. William H. Norman, Science Education Center.

**University of Notre Dame, Notre Dame, Indiana
46556**

Study in *Mathematics* for junior and senior high school teachers of mathematics. Priority given to teachers in Illinois, Indiana, Michigan and Ohio. Instructional program centered around sequence leading to M.S. degree in mathematics. Opportunities available for training in the conduct of in-service programs. Special programs for intern-teachers and for supervisor-trainees. Consultation available to teachers and administrators in northern Indiana and southern Michigan. Dr. Abraham Goetz, Department of Mathematics.

San Jose State College, San Jose, California 95114

Study in *Mathematics* for junior and senior high school teachers of mathematics in California counties north of Santa Barbara County and in western Nevada. Opportunities available to teachers at all levels of preparation include programs in computer science, curriculum materials, research participation, and the conduct of in-service programs. Special program for intern-teachers and for supervisor-trainees. Consultation available to teachers and administrators in service-area indicated above. Dr. Robert Pruitt, Department of Mathematics.

University of South Dakota, Vermillion, South Dakota 57069

Study in *Chemistry* and *Biology* for junior and senior high school teachers of these subjects, primarily in Iowa, Minnesota, Nebraska, North Dakota and South Dakota. Opportunities available for training in the conduct of in-service programs which emphasize new curriculum materials. Special program for intern-teachers. Consultation available to teachers and administrators in service-area indicated above. Dr. Charles R. Estee, Department of Chemistry.

Virginia State College, Petersburg, Virginia 23803

Study in the *Life (Biological)* and *Earth Sciences* for junior and senior high school teachers of these projects, primarily in Virginia. Opportunities available to biology teachers having a basic background in the life sciences, and to earth science teachers having an undergraduate major in one of the scientific disciplines but little or no background in the geological sciences. Special pre-service programs at the pre- and post-baccalaureate levels. Consultation and resources available to teachers and administrators in indicated service-area interested in implementation of new curricular materials. Dr. Richard H. Dunn, Department of Biology.

University of Wyoming, Laramie, Wyoming 82070

Study in the *Biological* and/or *Physical Sciences* for junior and senior high school teachers of these subjects, primarily in the Rocky Mountain and Plains states. Opportunities available for training in the conduct of in-service programs at "portal schools" dealing with new curriculum materials, research participation together with students from the teachers' home school, and the development of classroom and laboratory materials. Special program for intern-teachers. Consultation available to teachers and administrators in service-area indicated above. Dr. Samuel W. Harding, Department of Physics.

**OTHER
NATIONAL SCIENCE FOUNDATION
PROGRAMS FOR TEACHERS**

National Science Foundation directories listing institutions offering other programs for teachers are available on request. Address:

National Science Foundation
Washington, D.C. 20550

Requests for directories by **specific title** may be submitted at any time, and directories will be mailed as soon as they become available. **Please use a separate postal card for each kind of directory requested.**

The directory describing *Summer Institutes for Secondary School Teachers of Science and Mathematics* (E71-P-11) for 1972 will be available in January 1972. Application deadline is March 1, 1972.

The directory describing *In-Service Institutes for Secondary School Teachers and Supervisors of Science and Mathematics* (E72-P-1) for 1972-73 will be available in March 1972.

Programs designed for junior college and college teachers are listed in *College Teacher Programs—Directory* (E-71-U-9), which will be available in December 1971.

The National Science Foundation supports *Cooperative College-School Science Programs* which are locally oriented and concerned with improvements of school systems and which include teacher education in science and mathematics. The directory (E72-P-23) of projects for the summer of 1972 and academic year 1972-73 will be available in January.

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